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Docket No.: 10010635-01

(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
William G. McCollom et al.

Application No.: 10/016,958

Confirmation No.: 7352

Filed: December 7, 2001

Art Unit: 2151

For: METHOD AND SYSTEM FOR
DETERMINING AUTONOMOUS SYSTEM
TRANSIT VOLUMES

Examiner: J. B. Walsh

APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

As required under 37 C.F.R. § 41.37(a), this brief is filed within two months of the Notice of Appeal filed in this case on August 8, 2007, and is in furtherance of said Notice of Appeal.

The fees required under 37 C.F.R. § 41.20(b)(2) are being paid by deposit account. Please charge to Deposit Account 50-1078 the sum of $500.00. At any times during the pendency of this application, please charge any fees required or credit aqny overpayment to Deposit Account 40-1078 pursuant to 37 C.F.R. 1.25.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1206:

70044886.1

I.   REAL PARTY IN INTEREST

The real party in interest for this appeal is:

Agilent Technologies, Inc.

II.   RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III.   STATUS OF CLAIMS

A.   Total Number of Claims in Application

There are 23 claims pending in application.

B.   Current Status of Claims

1.   Claims canceled: 5, 9, 12, 18, 28-30

2.   Claims withdrawn from consideration but not canceled: None

3.   Claims pending: 1-4, 6-8, 10-11, 13-17, 19-27

4.   Claims allowed: None

5.   Claims rejected: 1-4, 6-8, 10-11, 13-17, 19-27

C.   Claims On Appeal

The claims on appeal are claims 1-4, 6-8, 10-11, 13-17, 19-27

IV.   STATUS OF AMENDMENTS

Applicant did file an Amendment After Final Rejection to correct typographical errors in claims 22 and 26. The claims listed in Appendix A reflect these amendments. However, there are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

V.   SUMMARY OF CLAIMED SUBJECT MATTER

The following provides a concise explanation of the subject matter defined in each of the separately argued claims involved in the Appeal, referring to the specification by page and line number and to the drawings by reference characters, as required by 37 C.F.R. § 41.37(c)(1)(v). Each element of the claims is identified by a corresponding reference to the specification and drawings where applicable. It should be noted that the citation to passages in the specification and drawings for each claim element does not imply that the limitations from the specification and drawings should be read into the corresponding claim element.

Embodiments of the invention according to claim 1 provide a method of determining autonomous system volume data, comprising: collecting (page 11, line 6) data flow statistics for at least one router (102, 104 of Figure 1); collecting (page 12, line 5) routing information base data for each of the at least one router, the routing information base data identifying at least one selected autonomous system path for a destination address; and for each destination address identified in the data flow statistics, correlating (page 12, line 10) one of the data flow statistics corresponding to the destination address to each autonomous system included in the at least one selected autonomous system path corresponding to the destination address thereby yielding autonomous system volume data (200 of Figure 2).

Embodiments of the invention according to claim 14 provide a system (100 of Figure 1, page 7, lines 6-23) for determining autonomous system volume data, comprising: a data flow collection node (112 of Figure 1, page 7, line 9) adapted to collect data flow statistics from at least one router (102, 104 of Figure 1, page 7, line 8); a routing information base collection node (114 of Figure 1, page 7, line 13) adapted to periodically collect routing information base data from the at least one router; and a correlation node (116 of Figure 1, page 7, line 18) adapted to, for each destination address identified in the data flow statistics, correlate one of the data flow statistics corresponding to the destination address to each autonomous system included in the at least one selected autonomous system path corresponding to the destination address and thereby yield autonomous system volume data.

Embodiments of the invention according to claim 22 provide a method of generating autonomous system volume data comprising: detecting (302 of Figure 3, page 9, line 10) at least one first data flow having a first volume and directed toward a first destination address; identifying (page 8, line 5) a first selected autonomous system path in a routing information base over which said first data flow is routed and for each autonomous system in the first selected autonomous system path, incrementing (304 of Figure 3, page 9, line 12) a counter by an amount indicating the first volume.

Embodiments of the invention according to claim 25 provide a method of generating autonomous system volume data comprising: detecting (302 of Figure 3, page 9, line 10) at least one first data flow having a first volume and directed toward a first destination address; identifying (page 8, line 5) a first selected autonomous system path in a routing information base over which said first data flow is routed and for each autonomous system in a first synthetic autonomous system path constructed using the at least one first selected autonomous system path, incrementing (304 of Figure 3, page 9, line 12) a counter by an amount indicating the first volume.

VI.   GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-4, 6-8, 10-11, 13-17, and 19-27 are rejected under 35 U.S.C. § 102(e) as being anticipated by Farrell et al. (US '663, hereinafter Farrell).

VII.   ARGUMENT

Appellant respectfully traverses the outstanding rejections of the pending claims, and requests that the Board reverse the outstanding rejections in light of the remarks contained herein. The claims do not stand or fall together. Instead, Appellant presents separate arguments for various independent and dependent claims. Each of these arguments are presented with separate headings and sub-headings as required by 37 C.F.R. § 41.37(c)(1)(vii).

Claims 1-4, 6-8, 10-11, 13-17, and 19-27 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Farrell. Appellant hereby traverses the rejection.

To anticipate a claim under 35 U.S.C. § 102, a reference must teach every element of the claim, *Verdegaal Bros. v. Union Oil Co. of Cal.*, 2 U.S.P.Q. 2d 1051, 1053 (Fed. Cir. 1987). Moreover, in order for a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, "[t]he elements must be arranged as required by the claim," *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). The 35 U.S.C. § 102 rejection of record fails to establish a 35 U.S.C. § 102 rejection in accordance with the foregoing requirements.

A.   Independent Claim 1

Claim 1 defines a method of determining autonomous system volume data that includes collecting routing information base data for each of the at least one router, the routing information base data identifying at least one selected autonomous system path for a destination address, and for each destination address identified in the data flow statistics, correlating one of the data flow statistics corresponding to the destination address to each autonomous system included in the at least one selected autonomous system path corresponding to the destination address thereby yielding autonomous system volume data. Farrell does not disclose at least these limitations. While Farrell may receive network flow information and produce records based on

the information, Farrell does not collect routing information base data. The Examiner cites the

Abstract and the text at column 2, lines 52-54 of Farrell as teaching this limitation. However, the

Abstract generally describes a system for collecting and aggregating data from network entries,

and the text at column 2 defines network devices. Neither of these citations of Farrell teaches the

collection of routing information base data. Note that claim 1 defines that the routing

information base data identify at least one selected autonomous system path for a destination

address. Cited portions of Farrell do not teach routing information base data that identifies at

least one selected autonomous system path for a system address. Moreover, Farrell does not

correlate the data flow statistics ... to the destination address. The Examiner cites the text at

column 7, line 58 of Farrell as teaching this limitation. This portion of Farrell teaches that the

network accounting records maybe combined in different ways, but does not disclose correlation

of the data flow statistics ... to the destination address. Thus, Farrell does not teach all of the

claimed limitations. Therefore, the Appellant respectfully asserts that for the above reasons

claim 1 is patentable over the 35 U.S.C. § 102 rejection of record, and respectfully requests

reversal of the rejection of record.

   B. Dependent Claim 2

   Claim 2 depends from base claim 1, and thus inherits all limitations of claim 1. Claim 2

sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts

that for the reasons cited with respect to claim 1, claim 2 is also patentable over the 35 U.S.C. §

102 rejection of record, and respectfully request reversal of the rejection of record.

   C. Dependent Claim 3

   Claim 3 depends from base claim 1, and thus inherits all limitations of claim 1. Claim 3

sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts

that for the reasons cited with respect to claim 1, claim 3 is also patentable over the 35 U.S.C. §

102 rejection of record, and respectfully request reversal of the rejection of record.

Claim 3 additionally defines that the step of collecting the data flow statistics for the at least one router comprises: collecting the data flow statistics during a pre-determined time interval; and aggregating the data flow statistics by destination address. Farrell does not disclose at least these limitations. The Examiner cites the text at column 14, line 14, and column 24, line 31 of Farrell as disclosing these limitation. The Appellant notes that the portion at column 14 states that metrics may be associated over specified period of time, however this does not teach collecting the data flow statistics during a pre-determined time interval. The Appellant further notes that the portion at column 24 generally teaches that IP packets include a destination address, however this does not teach aggregating the data flow statistics by destination address. Thus, Farrell does not teach all of the claimed limitations. Therefore, the Appellant respectfully asserts that for the above reasons claim 3 is patentable over the 35 U.S.C. § 102 rejection of record, and respectfully requests reversal of the rejection of record.

D.   Dependent Claim 4

Claim 4 depends from base claim 1, and thus inherits all limitations of claim 1. Claim 4 sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts that for the reasons cited with respect to claim 1, claim 4 is also patentable over the 35 U.S.C. § 102 rejection of record, and respectfully request reversal of the rejection of record.

E.   Dependent Claim 6

Claim 6 depends from base claim 1, and thus inherits all limitations of claim 1. Claim 6 sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts that for the reasons cited with respect to claim 1, claim 6 is also patentable over the 35 U.S.C. § 102 rejection of record, and respectfully request reversal of the rejection of record.

Claim 6 additionally defines that the step of collecting the routing information base data for the at least one router comprises taking a snapshot of border gateway protocol data. Farrell does not disclose at least these limitations. The Examiner cites the text at column 2, line 31 as disclosing this limitation. The Appellant notes that the portion at column 2 states that the

network devices can be disparate, however this does not teach taking a snapshot of border gateway protocol data. Thus, Farrell does not teach all of the claimed limitations. Therefore, the Appellant respectfully asserts that for the above reasons claim 6 is patentable over the 35 U.S.C. § 102 rejection of record, and respectfully requests reversal of the rejection of record.

F.   Dependent Claim 7

Claim 7 depends from base claim 1, and thus inherits all limitations of claim 1. Claim 7 sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts that for the reasons cited with respect to claim 1, claim 7 is also patentable over the 35 U.S.C. § 102 rejection of record, and respectfully request reversal of the rejection of record.

Claim 7 additionally defines that the step of correlating comprises: identifying an autonomous system path corresponding to the prefix; correlating a data flow statistic corresponding to the destination address to each autonomous system included in the autonomous system path. Farrell does not disclose at least these limitations. The Examiner cites the text at column 14, line 20 and column 7, line 58 as disclosing these limitations. The Appellant notes that the portion at column 14, line 20 merely recites having autonomous system numbers, which is not identifying an autonomous system path. The Appellant also notes that the portion at column 7 teaches that a network accounting record includes a destination, however this does not teach correlating a data flow statistic corresponding to the destination address. Thus, Farrell does not teach all of the claimed limitations. Therefore, the Appellant respectfully asserts that for the above reasons claim 7 is patentable over the 35 U.S.C. § 102 rejection of record, and respectfully requests reversal of the rejection of record.

G.   Dependent Claim 8

Claim 8 depends from base claim 1, and thus inherits all limitations of claim 1. Claim 8 sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts that for the reasons cited with respect to claim 1, claim 8 is also patentable over the 35 U.S.C. § 102 rejection of record, and respectfully request reversal of the rejection of record.

Claim 8 additionally defines identifying a destination address in the data flow statistics and correlating a data flow statistic corresponding to the destination address to each autonomous system included in an autonomous system path corresponding to the destination address. Farrell does not disclose at least these limitations. The Examiner cites the text at column 14, line 20 and column 7, line 58 as disclosing these limitations. The Appellant notes that the portion at column 14, line 20 merely recites having an autonomous system numbers, which is not correlating a data flow statistic ... to each autonomous system. The Appellant also notes that the portion at column 7 teaches that a network accounting record includes a destination, however this does not teach identifying a destination address. Thus, Farrell does not teach all of the claimed limitations. Therefore, the Appellant respectfully asserts that for the above reasons claim 8 is patentable over the 35 U.S.C. § 102 rejection of record, and respectfully requests reversal of the rejection of record.

H.   Dependent Claim 10

Claim 10 depends from claims 1 and 7, and thus inherits all limitations of claims 1 and 7. Claim 10 sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts that for the reasons cited with respect to claims 1 and 7, claim 10 is also patentable over the 35 U.S.C. § 102 rejection of record, and respectfully request reversal of the rejection of record.

I.   Dependent Claim 11

Claim 11 depends from claims 1 and 8, and thus inherits all limitations of claims 1 and 8. Claim 11 sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts that for the reasons cited with respect to claims 1 and 8, claim 11 is also patentable over the 35 U.S.C. § 102 rejection of record, and respectfully request reversal of the rejection of record.

J.   Dependent Claim 13

Claim 13 depends from base claim 1, and thus inherits all limitations of claim 1. Claim 13 sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts that for the reasons cited with respect to claim 1, claim 13 is also patentable over the 35 U.S.C. § 102 rejection of record, and respectfully request reversal of the rejection of record.

Claim 13 additionally defines computing at least one synthetic autonomous system path; and reporting autonomous system volume data of the at least one synthetic autonomous system path. Farrell does not disclose at least these limitations. The Examiner cites the text at column 14, line 20 and column 6, line 62 as disclosing these limitations. The Appellant notes that the portion at column 14, line 20 merely recites having an autonomous system numbers, which is not computing at least one synthetic autonomous system path. The Appellant also notes that the portion at column 6 teaches that in some complex environments, such as a virtual private network, the data collector does not know the real endpoints. However this does not teach reporting autonomous system volume data of the at least one synthetic autonomous system path. Thus, Farrell does not teach all of the claimed limitations. Therefore, the Appellant respectfully asserts that for the above reasons claim 13 is patentable over the 35 U.S.C. § 102 rejection of record, and respectfully requests reversal of the rejection of record.

K.   Independent Claim 14

Claim 14 defines a system for determining autonomous system volume data that a routing information base collection node adapted to periodically collect routing information base data from the at least one router; and a correlation node adapted to, for each destination address identified in the data flow statistics, correlate one of the data flow statistics corresponding to the destination address to each autonomous system included in the at least one selected autonomous system path corresponding to the destination address and thereby yield autonomous system volume data. Farrell does not disclose at least these limitations. While Farrell may receive network flow information and produce records based on the information, Farrell does have a routing information base data collection node. The Examiner cites the text at column 6, lines 13

and 18 of Farrell as teaching this limitation. However, the text describes a system comprising nodes that can represent routers, switches, etc. This citation of Farrell does not teach a routing information base data collection node as claimed. Moreover, Farrell does not teach a correlation node that correlates the data flow statistics ... to the destination address as claimed. The Examiner cites the accounting server 13 of Figure 3 and the text at column 6, lines 15-16 as teaching this limitation. This portion of Farrell teaches that the nodes can represent routers, switches, etc., but does not disclose correlation of the data flow statistics ... to the destination address. Thus, Farrell does not teach all of the claimed limitations. Therefore, the Appellant respectfully asserts that for the above reasons claim 14 is patentable over the 35 U.S.C. § 102 rejection of record, and respectfully requests reversal of the rejection of record.

L.   Dependent Claim 15

Claim 15 depends from base claim 14, and thus inherits all limitations of claim 14. Claim 15 sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts that for the reasons cited with respect to claim 14, claim 15 is also patentable over the 35 U.S.C. § 102 rejection of record, and respectfully request reversal of the rejection of record.

M.   Dependent Claim 16

Claim 16 depends from base claim 14, and thus inherits all limitations of claim 14. Claim 16 sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts that for the reasons cited with respect to claim 14, claim 16 is also patentable over the 35 U.S.C. § 102 rejection of record, and respectfully request reversal of the rejection of record.

Claim 16 additionally defines that the correlation node is adapted to: identify an autonomous system path corresponding to the prefix and correlate a data flow statistic corresponding to the destination address to each autonomous system included in the autonomous system path. Farrell does not disclose at least these limitations. The Examiner does not cite a

portion of Farrell that is operative to identify an autonomous system path. The Examiner cites correlator 308 to the latter limitation. However, nothing in Farrell is operative to correlate a data flow statistic corresponding to the destination address to each autonomous system included in the autonomous system path. Thus, Farrell does not teach all of the claimed limitations. Therefore, the Appellant respectfully asserts that for the above reasons claim 16 is patentable over the 35 U.S.C. § 102 rejection of record, and respectfully requests reversal of the rejection of record.

N.   Dependent Claim 17

Claim 17 depends from base claim 14, and thus inherits all limitations of claim 14. Claim 17 sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts that for the reasons cited with respect to claim 14, claim 17 is also patentable over the 35 U.S.C. § 102 rejection of record, and respectfully request reversal of the rejection of record.

Claim 17 additionally defines the correlation node is adapted to: identify a destination address in the data flow statistics and correlate a data flow statistic corresponding to the destination address to each autonomous system included in an autonomous system path corresponding to the destination address. Farrell does not disclose at least these limitations. The Examiner cites the text at column 24, line 31 and column 6, lines 41-49 as disclosing these limitations. The Appellant notes that the portion at column 24 defines that IP packets include destination addresses. However, this does not identify a destination address in the data flow statistics. The Appellant also notes that the portion at column 6 describes the data collector using the identifiers as endpoints. This does not disclose a device operative to correlate a data flow statistic corresponding to the destination address to each autonomous system included in an autonomous system path corresponding to the destination address. Thus, Farrell does not teach all of the claimed limitations. Therefore, the Appellant respectfully asserts that for the above reasons claim 17 is patentable over the 35 U.S.C. § 102 rejection of record, and respectfully requests reversal of the rejection of record.

O.   Dependent Claim 19

Claim 19 depends from base claim 14, and thus inherits all limitations of claim 14. Claim 19 sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts that for the reasons cited with respect to claim 14, claim 19 is also patentable over the 35 U.S.C. § 102 rejection of record, and respectfully request reversal of the rejection of record.

P.   Dependent Claim 20

Claim 20 depends from base claim 14, and thus inherits all limitations of claim 14. Claim 20 sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts that for the reasons cited with respect to claim 14, claim 20 is also patentable over the 35 U.S.C. § 102 rejection of record, and respectfully request reversal of the rejection of record.

Q.   Dependent Claim 21

Claim 21 depends from base claim 14, and thus inherits all limitations of claim 14. Claim 21 sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts that for the reasons cited with respect to claim 14, claim 21 is also patentable over the 35 U.S.C. § 102 rejection of record, and respectfully request reversal of the rejection of record.

Claim 21 additionally defines that a reporting node is adapted to report autonomous system volume data on at least one synthetic autonomous system path. Farrell does not disclose at least these limitations. The Examiner cites node 22 of Figure 1 as corresponding to the reporting node. However, nothing in Farrell teaches that node 22 is adapted to report autonomous system volume data on at least one synthetic autonomous system path. Thus, Farrell does not teach all of the claimed limitations. Therefore, the Appellant respectfully asserts that for the above reasons claim 21 is patentable over the 35 U.S.C. § 102 rejection of record, and respectfully requests reversal of the rejection of record.

R.   Independent Claim 22

Claim 22 defines a method of generating autonomous system volume data that includes detecting at least one first data flow having a first volume and directed toward a first destination address; identifying a first selected autonomous system path in a routing information base over which said first data flow is routed; and for each autonomous system in the first selected autonomous system path, incrementing a counter by an amount indicating the first volume. Farrell does not disclose at least these limitations. While Farrell may receive network flow information and produce records based on the information, Farrell does not generate autonomous system volume data. Nor does Farrell disclose that the detected data flow has a first volume and is directed toward a first destination address. The Examiner cites the text at column 5, line 3 as teaching this limitation. This portion of Farrell states that the accounting process comprises a flow data collection layer. It does not specify that the detected data flow has a first volume and is directed toward a first destination address. Moreover, Farrell does not identify a first selected autonomous system path. Farrell may detect errors (column 19, line 8), may monitor traffic over a link (column 23, line 44), and may monitor ports (column 6, line 12), but Farrell does not identify an autonomous system path. Also, the Appellant notes that the Examiner does not cite a portion of Farrell as teaching this limitation. Furthermore, Farrell does not increment a counter for each autonomous system path. Farrell may maintain counters for tracking packets in/out or bytes in/out (column 6, line 12), may use a summation process on data (column 17, line 29), and may store network accounting records (column 21, line 22), but Farrell does not have a counter for each autonomous system path. The Examiner cites the text at column 6, line 20 as teaching this limitation. However, this portion of Farrell does not disclose a counter. Thus, Farrell does not teach all of the claimed limitations. Therefore, the Appellant respectfully asserts that for the above reasons claim 22 is patentable over the 35 U.S.C. § 102 rejection of record, and respectfully requests reversal of the rejection of record.

S.   Dependent Claim 23

Claim 23 depends from base claim 22, and thus inherits all limitations of claim 22. Claim 23 sets forth features and limitations not recited by Farrell. Thus, the Appellant

respectfully asserts that for the reasons cited with respect to claim 22, claim 23 is also patentable over the 35 U.S.C. § 102 rejection of record, and respectfully request reversal of the rejection of record.

Claim 23 additionally recites detecting at least one second data flow having a second volume and directed toward a second destination address using a second selected autonomous system path in the routing information base; for each autonomous system in the second selected autonomous system path, incrementing a counter by an amount indicating the second volume; and wherein at least one autonomous system in the routing information base is updated before the detecting of the at least one second data flow. Farrell does not disclose at least these limitations. The Examiner cites text at column 5, line 3 and column 6, line 20 as teaching these limitations. The portion at column 5 teaches that the accounting process comprises a flow data collection layer. It does not specify that the detected data flow has a second volume and is directed toward a second destination address. Moreover, Farrell does not identify a second selected autonomous system path. Also, the Appellant notes that the Examiner does not cite a portion of Farrell as teaching this limitation. The portion at column 6 of Farrell does not disclose a counter. The Examiner then states that the first flow will be detected then the second flow will be detected as an attempt to read in the last limitation. However, this statement does not teach that the one autonomous system in the routing information base is updated before the detecting of the at least one second data flow. Thus, Farrell does not teach all of the claimed limitations. Therefore, the Appellant respectfully asserts that for the above reasons claim 23 is patentable over the 35 U.S.C. § 102 rejection of record, and respectfully requests reversal of the rejection of record.

T.   Dependent Claim 24

Claim 24 depends from base claim 22, and thus inherits all limitations of claim 22. Claim 24 sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts that for the reasons cited with respect to claim 22, claim 24 is also patentable

over the 35 U.S.C. § 102 rejection of record, and respectfully request reversal of the rejection of record.

Claim 24 additionally defines that that the method includes providing counter data resulting from the incrementing of the counter during a specified time period; analyzing the counter data; and reporting results of the step of analyzing. Farrell does not disclose at least these limitations. The Examiner cites the text at column 7, line 50 as disclosing these limitations. The Appellant also notes that the portion at column 7 teaches that a data collector translates information into a network accounting record. This does not teach the providing, analyzing and reporting operations as claimed. Thus, Farrell does not teach all of the claimed limitations. Therefore, the Appellant respectfully asserts that for the above reasons claim 24 is patentable over the 35 U.S.C. § 102 rejection of record, and respectfully requests reversal of the rejection of record.

U.   Independent Claim 25

Claim 25 defines a method of generating autonomous system volume data that includes detecting at least one first data flow having a first volume and directed toward a first destination address; identifying a first selected autonomous system path in a routing information base over which said first data flow is routed and for each autonomous system in a first synthetic autonomous system path constructed using the at least one first selected autonomous system path incrementing a counter by an amount indicating the first volume. Farrell does not disclose at least these limitations. While Farrell may receive network flow information and produce records based on the information, Farrell does not generate autonomous system volume data. Nor does Farrell disclose that the detected data flow has a first volume and is directed toward a first destination address. The Examiner cites the text at column 5, line 3 as teaching this limitation. This portion of Farrell states that the accounting process comprises a flow data collection layer. It does not specify that the detected data flow has a first volume and is directed toward a first destination address. Moreover, Farrell does not identify a first selected autonomous system path. Farrell may detect errors (column 19, line 8), may monitor traffic over a link (column 23, line

44), and may monitor ports (column 6, line 12), but Farrell does not identify an autonomous system path. The Examiner cites the text at column 14, line 20 of Farrell as teaching this limitation. However, this portion merely recites having an autonomous system numbers., which is not identifying an autonomous system path. Furthermore, Farrell does not increment a counter indicating a volume for each autonomous system path. Farrell may maintain counters for tracking packets in/out or bytes in/out (column 6, line 12), may use a summation process on data (column 17, line 29), and may store network accounting records (column 21, line 22), but Farrell does not have a counter associated with each autonomous system path. The Examiner also cites the text at column 6, line 20 as teaching this limitation. However, this portion of Farrell does not disclose a counter. Thus, Farrell does not teach all of the claimed limitations. Therefore, the Appellant respectfully asserts that for the above reasons claim 25 is patentable over the 35 U.S.C. § 102 rejection of record, and respectfully requests reversal of the rejection of record.

V.   Dependent Claim 26

Claim 26 depends from base claim 25, and thus inherits all limitations of claim 25. Claim 26 sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts that for the reasons cited with respect to claim 25, claim 26 is also patentable over the 35 U.S.C. § 102 rejection of record, and respectfully request reversal of the rejection of record.

Claim 26 additionally defines detecting at least one second data flow having a second volume and directed toward a second destination address using a second selected autonomous system path in the routing information base; for each autonomous system in the second synthetic autonomous system path constructed using the second selected autonomous system path incrementing a counter by an amount indicating the second volume; and wherein at least one autonomous system in a routing information base is updated before the detecting of the at least one second data flow. Farrell does not disclose at least these limitations. The Examiner cites text at column 5, line 3 and column 6, line 20 as teaching these limitations. The portion at column 5 teaches that the accounting process comprises a flow data collection layer. It does not

specify that the detected data flow has a second volume and is directed toward a second destination address. Moreover, Farrell does not identify a second selected autonomous system path. Also, the Appellant notes that the Examiner does not cite a portion of Farrell as teaching this limitation. The portion at column 6 of Farrell does not disclose a counter. The Examiner then states that the first flow will be detected then the second flow will be detected as an attempt to read in the last limitation. However, this statement doe not teach that the one autonomous system in the routing information base is updated before the detecting of the at least one second data flow. Thus, Farrell does not teach all of the claimed limitations. Therefore, the Appellant respectfully asserts that for the above reasons claim 26 is patentable over the 35 U.S.C. § 102 rejection of record, and respectfully requests reversal of the rejection of record.

W.   Dependent Claim 27

Claim 27 depends from base claim 25, and thus inherits all limitations of claim 25. Claim 27 sets forth features and limitations not recited by Farrell. Thus, the Appellant respectfully asserts that for the reasons cited with respect to claim 25, claim 27 is also patentable over the 35 U.S.C. § 102 rejection of record, and respectfully request reversal of the rejection of record.

Claim 27 additionally defines providing counter data resulting from the incrementing of the counter during a specified time period; analyzing the counter data; and reporting results of the step of analyzing. Farrell does not disclose at least these limitations. The Examiner cites the elements 18, 17, and 22 of Figure 1 as being operative as claimed. The Appellant notes that these elements do not perform the providing, analyzing and reporting operations as claimed. Thus, Farrell does not teach all of the claimed limitations. Therefore, the Appellant respectfully asserts that for the above reasons claim 27 is patentable over the 35 U.S.C. § 102 rejection of record, and respectfully requests reversal of the rejection of record.

VIII. CLAIMS APPENDIX

A copy of the claims involved in the present appeal is attached hereto as Appendix A.

IX.   EVIDENCE APPENDIX

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the examiner is being submitted.

X.   RELATED PROCEEDINGS APPENDIX

No related proceedings are referenced in II. above, hence copies of decisions in related proceedings are not provided.

Dated: October 8, 2007   Respectfully submitted,

I hereby certify that this paper (along with any
paper referred to as being attached or enclosed)
is being transmitted via the Office electronic filing
system in accordance with § 1.6(a)(4).

Dated: October 8, 2007

Signed:

Joy H. Perigo

By

Michael A. Papalas
Registration No.: 40,381
Attorney for Applicant

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APPENDIX A

The claims involved in the present appeal are listed below.

1.   A method of determining autonomous system volume data, comprising:

collecting data flow statistics for at least one router;

collecting routing information base data for each of the at least one router, the routing information base data identifying at least one selected autonomous system path for a destination address; and

for each destination address identified in the data flow statistics, correlating one of the data flow statistics corresponding to the destination address to each autonomous system included in the at least one selected autonomous system path corresponding to the destination address thereby yielding autonomous system volume data

2.   The method of claim 1, further comprising, following the step of correlating:

analyzing the autonomous system volume data; and

reporting results of the step of analyzing.

3.   The method of claim 1, wherein the step of collecting the data flow statistics for the at least one router comprises:

collecting the data flow statistics during a pre-determined time interval; and aggregating the data flow statistics by destination address.

4.   The method of claim 1, wherein the step of collecting the data flow statistics for the at least one router comprises using a data flow collection program.

5.   (Canceled)

6.   The method of claim 1, wherein the step of collecting the routing

information base data for the at least one router comprises taking a snapshot of border gateway protocol data.

7.   The method of claim 1, wherein the step of correlating comprises:

identifying a destination address in the data flow statistics;

identifying a prefix corresponding to the destination address;

identifying an autonomous system path corresponding to the prefix;

correlating a data flow statistic corresponding to the destination address to each autonomous system included in the autonomous system path.

8.   The method of claim 1, wherein the step of comprises:

identifying a destination address in the data flow statistics; and

correlating a data flow statistic corresponding to the destination address to each autonomous system. included in an autonomous system path corresponding to the destination address.

9.   (Canceled)

10.   The method of claim 7, wherein the step of comprises repeating the steps of claim 7 for each destination address of the data flow statistics of each of the at least one router.

11.   The method of claim 8, wherein the step of correlating comprises repeating the steps of claim 8 for each destination address of the data flow statistics of each of the at least one router.

12.   (Canceled)

13.   The method of claim I, further comprising:

computing at least one synthetic autonomous system path; and

reporting autonomous system volume data of the at least one synthetic autonomous system path.

14.   A system for determining autonomous system volume data, comprising:

a data flow collection node adapted to collect data flow statistics from at least one router;

a routing information base collection node adapted to periodically collect routing information base data from the at least one router; and

a correlation node adapted to, for each destination address identified in the data flow statistics, correlate one of the data flow statistics corresponding to the destination address to each autonomous system included in the at least one selected autonomous system path corresponding to the destination address and thereby yield autonomous system volume data.

15.   The system of claim 14, further comprising a reporting node adapted to analyze and report on the autonomous system volume data.

16.   The system of claim 14, wherein the correlation node is adapted to:

identify a destination address in the data flow statistics;

identify a prefix corresponding to the destination address;

identify an autonomous system path corresponding to the prefix;

correlate a data flow statistic corresponding to the destination address to each autonomous system included in the autonomous system path.

17.   The system of claim 14, wherein the correlation node is adapted to:

identify a destination address in the data flow statistics; and

correlate a data flow statistic corresponding to the destination address to each autonomous system included in an autonomous system path corresponding to the destination address.

18.   (Canceled)

19.   The system of claim 14, wherein at least two of the data collection node, the routing information base collection node, and the correlation node are the same node.

20.   The system of claim 14, wherein the data flow collection node, the routing information base collection node, and the correlation node are each a separate node.

21.   The system of claim 14, further comprising a reporting node adapted to report autonomous system volume data on at least one synthetic autonomous system path.

22.   A method of generating autonomous system volume data comprising:

detecting at least one first data flow having a first volume and directed toward a first destination address;

identifying a first selected autonomous system path in a routing information base over which said first data flow is routed and

for each autonomous system in the first selected autonomous system path, incrementing a counter by an amount indicating the first volume.

23.   The method of claim 22, further comprising:

detecting at least one second data flow having a second volume and directed toward a second destination address using a second selected autonomous system path in the routing information base;

for each autonomous system in the second selected autonomous system path, incrementing a counter by an amount indicating the second volume; and

wherein at least one autonomous system in the routing information base is updated before the detecting of the at least one second data flow.

24.   The method of claim 22, further comprising:

providing counter data resulting from the incrementing of the counter during a specified time period;

analyzing the counter data; and

reporting results of the step of analyzing.

25.   A method of generating autonomous system volume data comprising:

detecting at least one first data flow having a first volume and directed toward a first destination address;

identifying a first selected autonomous system path in a routing information base over which said first data flow is routed and

for each autonomous system in a first synthetic autonomous system path constructed using the at least one first selected autonomous system path incrementing a counter by an amount indicating the first volume.

26.   The method of claim 25, further comprising:

detecting at least one second data flow having a second volume and directed toward a second destination address using a second selected autonomous system path in the routing information base

for each autonomous system in [[s]] the second synthetic autonomous system path constructed using the second selected autonomous system path incrementing a counter by an amount indicating the second volume; and

wherein at least one autonomous system in a routing information base is updated before the detecting of the at least one second data flow.

27.   The method of claim 25, further comprising:

providing counter data resulting from the incrementing of the counter during a specified time period;

analyzing the counter data; and

reporting results of the step of analyzing.

28-30. (Canceled)

APPENDIX B

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the examiner is being submitted.

APPENDIX C

No related proceedings are referenced in II. above, hence copies of decisions in related proceedings are not provided.